

In closing this appeal, may I be pardoned for going beyond the usual bounds of official correspondence by saying that in my belief, no achievement of the Chief of the Bureau will rank higher in years to come than the reform urged in this paper. The introduction of a scientific system of records and notation will be far-reaching in its good effects. I am not unmindful of many and important advances which have been made in the past few years, but I believe that in certain aspects this is the most important matter that has yet come before the Chief for action.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be lent for a limited time to officials and employees who make application for them. Anonymous publications are indicated by a —.

Azores. Service météorologique.

Résumé d'observations 1907. Lisbonne. 1908. 15 p. f°.

Bebber, W[ilhelm] J[akob] van.

Anleitung zur Aufstellung von Wettervorhersagen... 2d ed. Braunschweig. 1908. vi, 38 p. f°.

Bemporad, A.

Nuova riduzione delle osservazioni pireliometriche eseguite da K. Angström all'isola di Teneriffa. (Dagli Atti dell'Accademia gioenia di scienze naturali in Catania. Serie 5. v. 1. 12 p.)

Ueber die Veränderung der Luftdurchsichtigkeit mit der Höhe und an der Erdoberfläche. (Archiv für Optik. Leipzig. 1 Bd. p. 305-316.)

Besançon. Observatoire national astronomique, chronométrique et météorologique.

Bulletin météorologique. 19-21, 1903-5. Besançon. 1905. v. p. 4°.

Bouches-du-Rhone. Commission de météorologie.

Bulletin annuel 1907. 26 année. Marseille. 1908. 112 p. 4°.

Brounov, P. I.

... Einfluss der meteorologischen Bedingungen auf die Vegetation und die Ernte des Hafers im Tschernoziomgebiet. 1. Theil. St. Petersburg. 1908. 270 p. 4°. [Russian text.]

Brunhes, Bernard.

L'Observatoire du Puy-de-Dôme depuis 1876. Clermont-Ferrand. 1908. 16 p. f°.

Bulgaria. Institut météorologique.

Annuaire 1900. Sofia. 1908. 63 p. f°.

Annuaire 1907. Sofia. 1908. 127 p. f°.

David, Pierre.

Les travaux de magnétisme terrestre à l'Observatoire du Puy-de-Dôme. Clermont-Ferrand. 1908. 10 p. f°.

Dörr, —.

Die Beobachtungsergebnisse der meteorologischen Stationen niederer Ordnung im Herzogtum Braunschweig während des Zeitraumes 1878-1905. (S.-A. Beiträge zur Statistik d. Herz. Braunschweig. Heft 20. 1907. 38 p.)

Finland. Meteorologische Zentralanstalt.

Meteorologisches Jahrbuch. Band 1, 1901. Helsingfors. 1908. v. p. f°.

Fortschritte der Physik.

1906. 1-3 Abteilung. Braunschweig. 1907. 3 v. 8°.

1907. 1-2 Abteilung. Braunschweig. 1908. 2 v. 8°.

France. Bureau central météorologique.

Annales. 1904. 1. Mémoires. Paris. 1908. xii, 377 p. f°.

Gesellschaft deutscher Naturforscher und Ärzte.

Verhandlungen... 79. Versammlung zu Dresden. 15.-21. September 1907. Naturwissenschaftliche Abteilungen. Leipzig. 1908. xiv, 284 p. 4°.

Gockel, Albert.

Die Luftelektrizität. Leipzig. 1908. 206 p. 8°.

Great Britain. Meteorological office.

Meteorological observations at stations of the second order. Edinburgh. 1908. xiv, 163 p. f°.

Hamburg, H[ugo] E[manuel].

Moyennes et extrêmes de la température de l'air en Suède 1856-1907. Upsala. 1908. 81 p. 20 pl. f°.

India. Meteorological department.

Report on administration 1907-1908. Simla. 1908. 24 p. f°.

Kensington. Solar physics observatory.

... Monthly mean value of barometric pressure for 73 selected stations over the earth's surface. London. 1908. 97 p. 30 pl. f°.

Mac-Auliffe, L.

Notions nouvelles en climatothérapie. Paris 1908. 177 p. 12°.

Messina Osservatorio.

Annuario. 1907. Messina. 1908. 8°.

Moore, John W.

Is our climate changing? Dublin. 1908. 26 p. 8°. (Repr. Dublin journal of medical science, Oct., 1908.)

[Naturforschender Verein in Brünn.]

Ergebnisse der phaenologischen Beobachtungen aus Mähren und Schlesien im Jahre 1905. Brünn, 1907. 16 p. 8°.

Phillip, George, and son (pub.).

Philip's meteorological calendar. London. n. d. 52 sheets.

Plumandon, J. R.

... Le climat du Département du Puy-de-Dôme. Clermont-Ferrand 1908. 23 p. 8°. (Association française pour l'avancement des sciences. Congrès de 1908 à Clermont-Ferrand.)

Prague. K. k. Sternwarte.

Magnetische und meteorologische Beobachtungen 1900-1907. Prag. 1901-1908. 1°.

Pyrénées-orientales. Commission météorologique.

Bulletin météorologique 1907. Perpignan. [1908.] 51 p. 4°.

Ratzel, Friedrich.

Die Erde und das Leben. Leipzig. 1901-1902. 2 v. 4°.

Sweden. Statens meteorologiska Centralanstalt.

Meteorologiska iakttagelser. 1907. Upsala. [1908.] x, 159 p. 1°.

Transvaal. Meteorological department.

Annual report. 1907. Pretoria. 1908. 126 p. 1°.

Vaucluse. Commission météorologique.

Compte rendu. 1907. Avignon. [1908.] 34 p. 1°.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —.

American geographical society. Bulletin. New York. v. 40. October, 1908.

Huntington, Ellsworth. The climate of ancient Palestine. pt. 2.

(October) p. 577; (November) p. 641-652.

American society civil engineers. Proceedings. New York. v. 34. November, 1908.

Pickett, William D. The floods of the Mississippi delta; their causes, and suggestions as to their control. p. 1232-1251.

Collingwood, F., Roberts, Thomas P. and others. Forests and reservoirs in their relation to stream flow, with particular reference to navigable rivers. p. 1290-1311.

Engineering news. New York. v. 60. November 19, 1908.

— The report of the Pennsylvania water supply commission; forests, stream flow, and flood control. p. 555-556.

Chittenden, H. M. Forests, stream flows, and storage reservoirs. p. 564.

Wilson, Elwood. The relation of forests to stream flow in Quebec. p. 564.

Experiment station record. Washington, D. C. v. 19. July, 1908.

Gager, C. S. The evaporation power of the air at the New York botanical garden. [Abstract. Describes apparatus.] p. 1010-1011.

Indian forester. Allahabad. v. 34. October, 1908.

— The effect of forests on rainfall. p. 571-573. [Argues that the rainfall of the world is chiefly dependent on the existence of forests. Assumes that 600 times as much evaporation occurs from a forest as from a free water surface of the same area.]

— Cause and effect of the gradual disappearance of forests on the earth's surface. [Abstract of paper by Ducamp.] p. 600-704.

India meteorological department. Memoirs. v. 20, pt. 4.

Jones, R. L. A discussion of types of weather in Madras. p. 53-71.

Meteorological society of Japan. Journal. Tokio. 27th year. 1908.

Yamada, J. Observations of the givre. [Relation of hoarfrost to fog.] (August.) p. 21-23.

Tsuitsui, M. Relation between the range of air temperature and the distribution of land and water. (October.) p. 27-28.

Nature. London. v. 79. November 12, 1908.

Boycott, A. E., and others. Caisson disease. p. 41-42.

Royal meteorological society. Quarterly journal. London. v. 34. 1908.

Rawson, H. E. The anticyclonic belt of the southern hemisphere. (July.) p. 165-188.

- Teisserenc de Bort, L.** Researches on the composition of air at great altitudes, with special reference to argon and its allies. (July.) p. 189-190.
- Upshall, W. C.** Weather observations in an elementary school. (July.) p. 191-198.
- Phillips, A. B. (Miss).** Nature study. Scheme of six nature study lessons on weather and climate. (July.) p. 198-202.
- Marriott, Wm.** The brontometer. (July.) p. 207-210. [Illustrated.]
- Lakeland sayings about weather. (July.) p. 213-214.
 - The rain-tree of Queensland. (July.) p. 214.
 - Icebergs of the southern hemisphere. (July.) p. 214-216.
- Hellmann, G[ustav].** The dawn of meteorology. (October.) p. 221-232.
- Keeling, B. F. E.** Upper-air observations in Egypt. (October.) p. 259-263.
- D'Albuquerque, J. P.** Balloon experiments in Barbados, November 6-8, 1907. p. 265-269.
- Lightning and compasses. (October.) p. 269.
- Russell, Spencer C.** Observations on the colour of lightning made at Epsom, 1903 to 1907. (October.) p. 271-276.
- Hooker, R. H.** An elementary explanation of correlation, illustrated by rainfall and depth of water in a well. (October.) p. 277-291.
- Gibbs, Lawrence.** The Hongkong typhoon, September, 1906. (October.) p. 293-299.
- The Franco-British exhibition and meteorology. (October.) p. 307.
- Mawley, Edward.** Report on the phenological observations for 1907. (October.) p. 233-237.
- Science. New York. New series.** v. 28. December, 1908.
- Wister, Owen.** An electric storm on the Washakie Needles. p. 837-839.
- Varney, B. M.** A notable cloud banner. p. 839-840.
- Scientific American. New York.** v. 99. December 12, 1908.
- Mills, James Cooke.** New discoveries about lightning. [Results of Larsen's photographs with a moving camera.] p. 430.
- Symons's meteorological magazine. London.** v. 43. 1908.
- Bates, D. C.** Report upon dry period and rain-making experiments at Oamaru, New Zealand. (September.) p. 145-147.
- The British association at Dublin. (September.) p. 145-147.
- Bernacchi, L. C.** Antarctic meteorology.—A review. (October.) p. 165-169.
- Bonacina, L. C. W.** Meteorology at the Franco-British exhibition. No. 3. (November.) p. 189-190.
- Terrestrial magnetism and atmospheric electricity. Baltimore.** v. 43. June, 1908.
- Biographical sketch of E. van Rijckevorsel. p. 72.
- Tokyo mathematico-physical society. Proceedings. Tokyo.** 2d ser., v. 4. September, 1908.
- Isitani, D.** Number of ions in the free atmosphere near hot springs. p. 370-377.
- Nagoaka, H.** Apparent seasonal variations of sea-level. p. 382-385.
- Okada, T., Abe, K., & Yamada, J.** On the heat conductivity of snow. p. 385-389.
- Annales de géographie. Paris.** 17 année. 15 novembre 1908.
- Riginitsis, D.** Le climat de l'Attique. p. 413-432.
- Ciel et terre. Bruxelles.** 29^e année. 1908.
- Rosenthal, Elmer.** Un cas remarquable de pulsations microsismiques. (1 novembre.) p. 413-416.
- Grégoire, Ach.** La plante et le milieu ambiant. pt. 1. (16 nov.) p. 427-438; pt. 2. (1 déc.) p. 455-462.
- Lagrange, E.** L'électricité atmosphérique. (16 nov.) p. 438-445. [Extended review of Gockel's "Die Luftelektrizität." Includes description and figure of Wulf's electrometer.]
- France. Académie des sciences. Comptes rendus. Paris.** Tome 147. 1908.
- Levy, Maurice & Sébert.** Rapport sur un mémoire intitulé: Recherches expérimentales sur la résistance de l'air effectuées par G. Eiffel. (16 nov.) p. 909-912.
- Nicolas.** Effeuves lumineux continus pendant un orage à l'île Lifou (îles Loyalty). (29 nov.) p. 1011-1012.
- Revue nécologique. Mons.** Juin, 1908.
- Okada, T.** Sur l'inégalité diurne du baromètre par différents degrés de nébulosité à Tokyo. p. 236-238.
- Un nouvel enregistreur de direction du vent. p. 239-240.
- Annalen der Hydrographie und maritimen Meteorologie. Berlin.** 36. Jahrgang. 1908.
- Schrötter.** Hebung der Kimm und Luftsiegelungen in der Nordsee. p. 490-497.
- Steffens, O.** Ueber einen neuen Apparat für die Registrierung der Windgeschwindigkeit (Normalanemograph). p. 513-515. [Illustrated.]
- Beiträge zur Physik der freien Atmosphäre. 2. Band. 5. Heft.** 1908.
- Ebert, H., & Lutz, O. W.** Der Freiballon im elektrischen Felde der Erde. p. 183-204.
- Kleinschmidt, H.** Ueber die Feuchtigkeitsverhältnisse der oberen Inversion. p. 205-207.
- Palazzo, L.** Beschreibung zweier Vorrichtungen zum Abwerfen oder Entleeren eines Ballons bei den Ballonaufstiegen über dem Meere. p. 208-211. [Illustrated.]
- Gaea. Leipzig.** 44. Jahrgang. December, 1908.
- Drahtlose Telegraphie und Wetterkarten vom Atlantischen Ozean. p. 765-766. [Criticism of Dr. Poll's views. Abstract of paper by Herrmann.]
- Himmel und Erde. Berlin.** 21. Jahrgang. Oktober 1908.
- Stüring, R.** Elektrische Zündungen von Luftschiffen. p. 24-27.
- Mi.** Enthält die Atmosphäre des Mars Wasserdampf? p. 33.
- Mi.** Ueber einen Perl schnurblitz. p. 33-34.
- Meteorologische Zeitschrift. Braunschweig.** 25. Band. November, 1908.
- Hellmann, O.** Die Anfänge der Meteorologie. p. 481-491.
- Field, F. H.** Eine neue Form des Meteorographen und andere Apparate zum Gebrauch für Drachenaufstiege. p. 491-496.
- Schmidt, Wilh[elm].** Zur Erklärung der gesetzmässigen Verteilung der Tropfengrössen bei Regenfällen. p. 496-500.
- Rykachev, M., jun.** Ueber den Einfluss der Unterlage auf den täglichen Gang der absoluten Feuchtigkeit. p. 501-510.
- Halbfass, Wilhel[helm].** Zur Frage der vertikalen Temperaturverteilung im östlichen Mittelmeer. p. 515-516.
- Lottermoser, H.** Temperaturbeobachtungen im Hochlande von Guatemala. p. 518-519.
- Hann, J[ulius].** R. Stüring über die Ergebnisse der Gewitterbeobachtungen in den Jahren 1903, 1904 und 1905. p. 519-520.
- H[ann], J[ulius].** Resultate der meteorologischen Beobachtungen zu Caracas in den Jahren 1906 und 1907. p. 521-522.
- Marten, W.** Ergebnisse zehnjähriger Sonnenscheinregistrierungen in Potsdam nebst Bemerkungen über die dabei benutzten Sonnenscheinautographen Campbell-Stokes und Jordan. p. 523-525.
- Physikalische Zeitschrift. Leipzig.** 9. Jahrgang. 1908.
- Debie, P.** Das elektromagnetische Feld um einen Zylinder und die Theorie des Regenbogens. (1. Nov.) p. 775-778.
- Everdingen, E. van.** Ueber die Ermittlung des Winkels zwischen Gradient und Windrichtung. (1. Nov.) p. 796-798.
- Fleming.** Beobachtungen der atmosphärischen Radioaktivität vom Freiballon. (16. Nov.) p. 801-803.
- Wetter. Berlin.** 25. Jahrgang. Oktober 1908.
- Peppler, W.** Zur Entstehung und Voraussage der Gewitter. p. 217-219.
- Schulze, Paul.** Ludwig Friedrich Kämptz. p. 219-224.
- Joester, Karl.** Die Föhnerscheinungen im Riesengebirge. p. 224-231.
- Börnstein, R.** Bericht abgestattet in der Hamburger Tagung der Deutschen Meteorologischen Gesellschaft. [Report on the public weather service of Germany.] p. 236-240.
- Zeitschrift für Gletscherkunde. Berlin.** 3. Band. Oktober 1908.
- Brückner, Ed.** Wärmeleitung des Schnees. p. 71-73.
- B. E.** Wärmestrahlung einer Schneedecke. p. 76.
- Hebel in Dampkring. Den Haag.** 6. Jaargang. November 1908.
- S., C.** Volkswijsheid over het weer. p. 101-103.
- Reale accademia di Lincei. Atti. Roma.** v. 17. 19 luglio 1908.
- Nasini, R. and Levi, M. C.** Sopra l'ozonizzazione dell' aria per azione dei sali e dell' emanazione di radio. p. 46-49.
- Alessandri, Camillo.** La radiazione solare alla Monte Rosa. Osservazioni eseguite alla Capanna-Osservatorio Regina Margherita negli 1905-1906. p. 58-65.
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- AN ANNOTATED BIBLIOGRAPHY OF EVAPORATION.**
- By Mrs. GRACE J. LIVINGSTON. Dated Washington, D. C., January 8, 1908.
- [Continued from the Monthly Weather Review, September, 1908.]
- Miller, J. F.** Synopsis of meteorological observations made at Whitehaven, Cumberland, in the years 1848-50. Edinb. new phil. jour., 1848, (—): 55; 1849, (—): 53; 1851, (—): 234. Includes observations on evaporation. 1852.
- Newman, J.** Description of a new evaporating gage. Phil. mag., 1852, 4(4):534-5. Describes an atmometer similar in design to that of Prinsep, 1825.
- Regnault, V.** Études sur l'hygrométrie. Compt. rend., 1852, 35:930-9. Ann. chim. et phys., 1853, 37:257-85. Translated from Compt. rend. in Ann. Phys. und Chem., 1853, 88:420-32. Repeats statements of 1845, and develops formulas for the psychrometer.
- Tarbé.** Note sur la mesure de l'évaporation à la Roche-sur-Yonne, pendant les années 1846 à 1850. Ann. ponts chaus., 1852, 3:249-52. Abstracted by Rogers Field, 1869.
- The evaporating basin employed in these experiments was made of masonry 8 feet 2 inches square and 1 foot 4 inches deep, and lined with zinc. Readings were taken once a month and the basin refilled to a standard level on a graduated scale fixed to one of the